Conservation of Life

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OF CANADA,
OTTAWA

INDEX

Foreword.—Hon. Clifford Sifton 3
Maternal Nursing of Children 5
The Infectivity of Tuberculosis 8
Regulations of Department of Agriculture re Tuberculosis in Dairy Cattle 9
Health Week 11
Child Rearing Must be Taught 13
First Canadian Town Planning Regulations 14
Municipal Milk Supply 17
How To Deal With Slums 19
The Public Abattoir 20
Prevention of Occupational Diseases 21
Children's Country Holidays 22

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Conservation of Life is the newer and broader Public Health—it embraces all of the Science of Hygiene. It seeks to minimize and prevent as far as possible disease, disability and waste in human life by the betterment of man's environment and occupation, assuring to all classes of the community those amenities which in their widest sense will produce the highest attainable degree of human efficiency. It is the centre around which gather and by which all our natural resources are vitalized and without which there can be no truly national vitality.

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Conservation of Life

Vol. I. OTTAWA, AUGUST 1914 No. 1

FOREWORD

HAS it ever occurred to you that nineteen-twentieths of the things that occupy our attention, outside of the ordinary work of securing a livelihood, really do not matter at all? Do you realize that after all there are only a few things that really affect our happiness? One of these few things is the preservation of life and health. Nothing here below matters to those who are dead; nothing matters very much to those who are sick and suffering and without a prospect of regaining health. At the root of all happiness of the individual and of the nation lies the question of preservation of life and health.

A generation ago in Canada little attention was given to what is called public health. The individual was left to kill or cure himself by patent medicines and domestic remedies, varied by an occasional doctor's visit. To the prevention of disease little thought was given. No longer than twenty-five or thirty years ago epidemics of diseases were popularly spoken of as visitations of Providence and punishment for sin. It is true that these epidemics were a punishment for sin, but it was the sin of avoidable ignorance.

There has been a revolution since that time. Public health is now the new gospel, and it is a sound gospel. An army of functionaries now act as curators of public health all over the world. Another army of trained scientists and investigators labour at the problems of life and health. Sanitary science commands the services of many of the world's devoted and unselfish investigators. As a result of their work new facts and new theories are put forward for public guidance in such a volume that the hard-worked health officer has not time to read them, much less investigate and determine their merits. This difficulty we hope in part to obviate. To observe the forward march of sanitary science, to note the discoveries of practical importance, and to place the results of this work before those who are in need of the latest and best information on the subject, is, in a modest way, the aim of this publication.

It will not be an easy task, and in its performance we shall no doubt leave much room for legitimate criticism; but an honest and we hope a fairly competent effort will be made to disseminate light on the one subject which vitally affects every human being.

Much progress has been made in Canada in the lessening of mortality and suffering by the adoption of scientific methods for the prevention of disease. Where thirty years ago ignorance and prejudice permitted great mortality and a distressing amount of preventable suffering, the light of science and modern sanitary methods have wrought a great and beneficent change. Nevertheless, we are only beginning to understand the problems which confront the health officer and the sanitary engineer. Constant study combined with persistent effort to adapt means to ends will bring about still greater benefits.

It is a great and inspiring work. *Mens sana in corpore sano* was the wise dictum of the ancient philosopher; but it has taken twenty centuries and more for the human race to achieve that elementary knowledge necessary to enable it to successfully combat the most common and ordinary diseases which prevent the body from being sound. In the history of the combat, in our own times, there stand out the names of Pasteur, Beale and Lister, who are more truly great, more justly entitled to the admiration and veneration of the world than the warriors and statesmen whose names fill the pages of history, but whose merits have generally consisted in planning the destruction and unhappiness of their fellow men. Who can compare in the service of suffering humanity with Pasteur, that peerless knight of science? Upon his investigations rest the whole pyramid of disease-preventing methods. No name in the history of the world stands for the alleviation of human suffering as does that of Louis Pasteur. His work is an epic—it is an inspiration for all time to every worker in the field of medical science.

The conservation of life and the increase of happiness by the prevention of disease! These are the ideals to which our efforts are directed, and in the prosecution of these ideals we confidently bespeak the sympathy and support of all who are in a position to offer effective assistance.

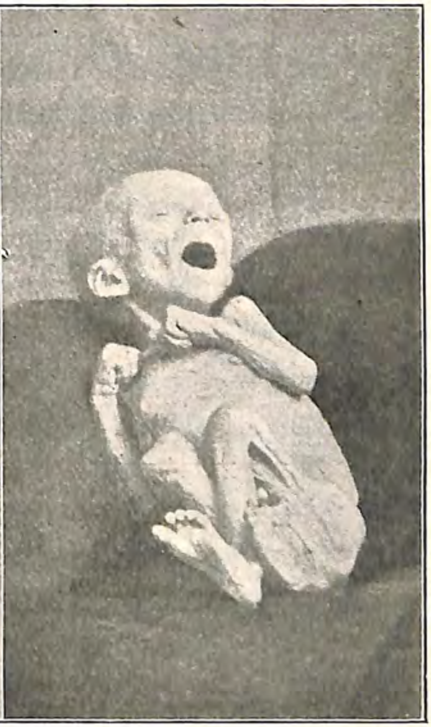
Train up thy children, England
Where hast thou mines—but in their industry?
Thy bulwarks where but in their breasts?
O grief, then—grief and shame,
If in this flourishing land there should be dwellings
Where the new-born babe doth bring unto its parent's soul
No joy—where squalid poverty
Gives it the scanty bread of discontent.

—*Southey.*

THE MATERNAL NURSING OF INFANTS

MANY reasons could be advanced for introducing this subject in the first number of this bulletin. The statement made by the Registrar General of Ontario in his report for the year 1913, viz., that 29 infants under one year died through *lack of care*, is a modern instance of the slaughter of the innocents, happening in this twentieth century, in the cultured province of Ontario, where millions of dollars are spent annually in the so-called education of the people. Is not the bold fact a reflection upon the government, the municipality, the people, and upon every citizen of the province?

BREAST FED


BOTTLE FED

Another reason is found in the statement of the Medical Officer of Health of the city of Toronto, made in the June number of *Health Bulletin*, which says:

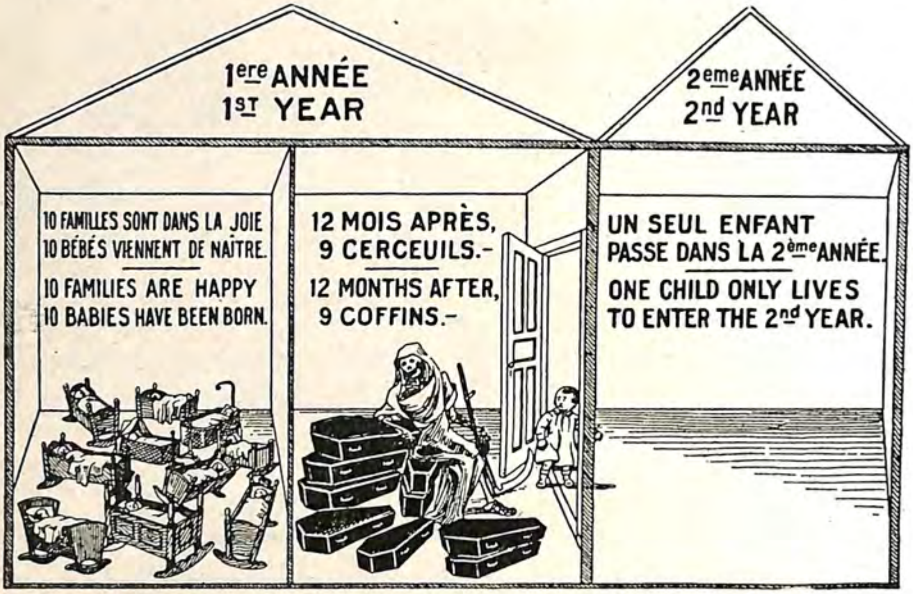
"Nine hundred and forty-nine babies under two years of age died in Toronto last summer. Most of these deaths were preventable because most were due to bottle-feeding. One hundred and twenty of the babies visited by the department of health nurses died during the summer months, and it is significant that 58 of these had working mothers. Only two were breast fed." Then follows the admonition at the bottom of the page: "After you have read the bulletin please pass it on." We would add: Ponder well the admonitions contained in the facts appearing therein.

The further reason is found in the *Winnipeg Health Bulletin* for the month of June. Of the 188 deaths reported 40 per cent, or 75, were infants under one year—while 101, or 53.7 per cent, were children under five years of age, and 62.7 per cent of all deaths were amongst persons under the age of 20 years. Truly a waste of human life and an object lesson in the necessity for a careful study of the conservation of life by a province which is largely dependent on immigration for a material growth in population.

How many of the deaths could have been prevented by the exercise on the part of mothers of their maternal function of "breast feeding" it is difficult to estimate with exactness, but the graphic representation shown herewith of the evil effects of artificial feeding, as set forth by the health authorities of the province of Quebec, is reproduced for the benefit of all Canada. This illustration appears on the reverse of the official envelopes of the Board, while the exhortation of a priest of the Roman Catholic Church which accompanies it is worthy of the earnest consideration of all mothers and fathers in Canada who console themselves upon the death of the baby that "the good die young."

Résultat de la substitution de l'alimentation artificielle (biberon) à l'alimentation maternelle

The result of the substitution of the milk-bottle for the mother's-milk



As Illustrated by the Health Authorities of Quebec

This simple appeal is one for the conservation of the greatest of Canada's resources and appeals to each one of us from a standpoint, the religious, which is supreme, and which must not be ignored if, as a nation, we expect to grow and prosper.

The appeal of the Christian teacher reads: "When an infant dies, why should the family foolishly console themselves by saying or hearing others say: 'Oh! he is very happy, he is one more angel in heaven.' Would it not be better, after having valiantly striven for the glory of the religion and the country, to become a saint later than an angel now."

The aversion shown by mothers of the present day to the feeding of their own infants is an outstanding feature of our so-called civilization. The shirking of this responsibility is usually attributed to want of ability on the part of the mothers, whereas the true reason is lack of desire, due to the curtailing of the mothers' freedom of action in regard to social duties during the months of lactation.

This deliberate suppression of the maternal milk is undertaken at the risk of the baby's life, and is attended with serious disaster to the mother.

The arguments that science has made great advances in the artificial feeding of infants, and has materially reduced its risks and dangers, and that at the present time thousands of infants are brought up on the bottle, ignores the fact that the lives of thousands are sacrificed at the same time, and the health of a large percentage of those raised upon the bottle is permanently marred.

Mothers and fathers must clearly understand that science has not and, indeed, cannot, altogether abolish the risks and dangers of artificial feeding ; nor will it ever be able to instil into the bottle those elements which lie deep hidden in the breast of the mother, beyond the reach of the analyst—those vital principles which cannot be supplied through any scientific device of man.

The cases, in Canada, in which a healthy mother has no milk or has unsuitable milk are extremely few, and the distinguishing of these cases should, in every instance be left to the medical man, who should bring his best skill to bear upon each case, having in view always the health of the mother as well as the vitality of the babe.

We have only pity for the mother who cannot nurse her baby, but consider that she who will not is a criminal; and, in the case of the death of the baby, both father and mother are homicides, for they, later, cannot satisfy the Divine Justice with the plea, "I did my best," while neglecting to nurse the baby and substituting, therefore, only an imperfect, though, perhaps, a scientifically compounded makeshift.

Perhaps the tale without words in the contrast picture shown herewith will bring home to Canadian mothers the fact that the making of Canadians is primarily in their hands and certainly the conservation of infant life is a duty they owe to themselves, the nation, and their Creator, and this can only be brought about by the assumption of intelligent motherhood. Mothers of Canada, we want the enhancement of all our national resources, and this can only be brought about by your personal efforts. Would you have your baby as No. (1)—breast fed, or as No. (2) —bottle fed ?

THE INFECTIVITY OF TUBERCULOSIS

THE latest authority, and perhaps the highest in the English-speaking world, to pronounce upon the infectivity of pulmonary tuberculosis is the Royal College of Physicians of London.

This official statement of the leading body of medical men in Great Britain, under date of April 6, 1914, cannot fail to be of importance and of interest to Canadians, particularly as it is concise, scientific, and capable of being understood by all.

To health officials, and those engaged in the campaign against the white plague, this pronouncement will prove of great assistance in dispelling any exaggerated fears as to the infectivity of the disease and cannot fail to bring the public to a more sane understanding as to just how the adoption of simple precautionary measures may prevent infection.

THE INFECTIVITY OF TUBERCULOSIS

1. Tuberculosis is an acquired disease, but certain constitutional types may be inherited which render the patient specially susceptible to infection, and there is reason to think that such susceptibility is an inherited character.

2 The infective agent is the tubercle bacillus. This may be contained in the various discharges and excreta of the patient, and expecially in the sputum of those suffering from pulmonary tuberculosis. No discharge is infective unless it contains the tubercle bacillus.

3. Cases of tuberculosis of bones, glands, and internal organs, from which there is no discharge, or which do not furnish any excretion, and cases of arrested pulmonary tuberculosis, have never been proved to be infectious.

> (By *arrest* is here meant that all the symptoms and physical signs of activity have disappeared, and the sputum has either ceased or no longer contains tubercle bacilli.)

4. The means by which tubercle bacilli may enter the body are:

(*a*) *By inoculation*, through a wound or abrasion of the skin. This has occasionally occurred to workers in laboratories, post-mortem attendants and others dealing with tuberculous material, and is presumably the way in which lupus is acquired.

(*b*) *By inhalation*. Susceptible animals are readily infected by the inhalation of air containing tubercle bacilli, whether in droplets or suspended as fine dust, but in the spread of the disease among human beings the latter appears to be the more important means of infection. The sputum or other discharges, whether on soiled handkerchiefs, linen, garments, or elsewhere, when dried, may become pulverized, and in this condition may be readily dispersed in the air of a room. That droplets of sputum are less important agents of infection is suggested by the fact that the incidence of consumption upon the staff, nurses, and others engaged in hospitals for the treatment of tuberculous disease, where all discharges are carefully disposed of, is not above the average in the general population.

(*c*) *By swallowing*. Dust infected by the tubercle bacillus may be conveyed to food and so enter the alimentary canal; or infection may occur more directly in the act of kissing, or by consumptive and healthy persons using the same food utensils. As about 10 per cent of the milk supplied to large cities contains tubercle bacilli derived from infected cows, this avenue of infection is particularly important in the case of children. The bovine tubercle bacillus is more commonly responsible for tuberculosis in young children than in adults, but the proportion of cases due to it varies very much in different localities.

There is no evidence that tuberculosis can be conveyed to others either by the breath alone, or by emanations from patients, or by their garments, unless soiled by dried sputum or discharges.

5. The spread of tuberculosis is favoured by uncleanliness, overcrowding and, imperfect ventilation, and is hindered by the opposite conditions. Experience in hospitals and other institutions, where the following precautionary measures have been thoroughly carried out, indicates that by such measures the risk of infection is reduced to a minimum, namely:

(*a*) The careful disposal and disinfection of the sputum and other discharges.

(*b*) The disinfection or destruction of soiled handkerchiefs, clothes and linen.

(*c*) The removal of dust by frequent moist cleansing of the floors, walls, etc., of the rooms.

(*d*) The supply of abundant air space, and free ventilation with fresh air.

No risk is incurred by living in the immediate neighbourhood of institutions for the treatment of tuberculosis which are properly conducted.

REGULATIONS OF DEPARTMENT OF AGRICULTURE RELATING TO TUBERCULOSIS IN DAIRY CATTLE

WITH the highly commendable object of assisting the cities and towns of Canada to insure a pure and wholesome milk supply, and with the special object of preventing the sale therein of milk from tuberculous cows, the Hon. the Minister of Agriculture promulgated, on May 18th, 1914, regulations thereon.

These regulations extend to all municipalities of five thousand and over and are thus available to two and a half millions of our people.

The one fact to be emphasized is that the initiative for their enforcement rests upon the inhabitants of the cities and towns benefited; their public opinion must be stirred up in the matter and all pressure possible be brought to bear upon health and municipal authorities for the early petitioning of the veterinary director general for their local enforcement.

The government is willing to act; it is up to the people to act also.

The regulations are as follows:

REGULATIONS RELATING TO TUBERCULOSIS

1. The aid of the Department of Agriculture, as aforesaid, will be given to such cities or towns, having a population of not less than five thousand persons, as shall have secured the necessary provisions under provincial legislative authority for the purpose of agreeing to the present regulations.

2. The Government of Canada will assist any city or town, which shall have signified in writing to the veterinary director general its desire to have the aid of the Department of Agriculture in controlling bovine tuberculosis in the cows supplying milk and cream to the said city or

town, provided the said city or town shall have stated in its application for the aid of the Department of Agriculture, as aforesaid, that, being thereunto duly empowered by law, it will undertake and provide that

(*a*) Dairies in which milk or cream are produced for sale therein shall be licensed.

(*b*) No license shall be issued unless the dairy conforms to the required standard.

(*c*) The standard shall require that the stable shall have an ample amount of air space, and at least two square feet of window glass for each cow, and shall be well ventilated, drained, and kept clean and sanitary.

(*d*) After two years from the date of the first test of the cattle of any dairy, the sale within the said town or city of milk or cream from any herd shall be prohibited, unless the said herd shows a clean bill of health from the veterinary inspector.

(*e*) An inspector or inspectors shall be appointed and paid by the said city or town, whose duty it shall be to see that the undertakings and provisions, as aforesaid, are carried out, and that the cows are kept clean and properly fed and cared for.

3. The veterinary director general, on receiving notice in writing from any such municipality of its desire to have the assistance of the Department of Agriculture, as aforesaid, shall forthwith make enquiry, and, if satisfied that the foregoing requirements are being carried out, shall send veterinary inspectors to inspect the said cows.

4. Veterinary inspectors shall use the tuberculin test, and also make a careful physical examination of the cows, in order to determine whether they are healthy or not. Dairy bulls shall also be examined and subsequently treated in the same way as cows.

5. Following the examination and test, the diseased cows and reactors shall be dealt with as follows:

(*a*) Cows which in the opinion of the inspector are affected with open tuberculosis and are distributing the germs of the disease through the milk, fæces or sputum, shall be sent to an abattoir under inspection and there slaughtered as soon as conveniently can be done. When no such abattoir is within reasonable distance, the cows shall be slaughtered in the presence of the inspector, who shall direct how the carcass shall be disposed of.

(*b*) Reactors to the test shall be separated from non-reactors as effectively as possible, (suspicious animals shall be classed as reactors), and the owner shall be given the choice of disposing of them in one of the following ways:

(1.) Immediate slaughter.

(2.) Slaughter after they have been prepared for the block, by drying off and feeding.

(3.) Retaining them in the herd, and selling no milk or cream until it has been pasteurized.

6. Compensation shall be paid to the owner of the herd for all cows slaughtered under these regulations upon the following basis:

(1) One half the appraised value of the cow if destroyed as a case of open tuberculosis.

(2) One-third the appraised value of the cow if destroyed as a reactor at the request of the owner.

(3) Valuation shall be made by the inspector, and shall not exceed the maximum valuation for cattle as specified in Section 6 of the Act.

7. The salvage from the carcass shall be paid to the owner of the cow in addition to the compensation, provided compensation and salvage together amount to less than the appraised value; if more, the surplus shall be paid to the Receiver General.

8. No compensation shall be paid to the owner unless, in the opinion of the Minister, he assists as far as possible in the eradication of the disease by following the instructions of the inspector as to disinfection, etc.

9. No milk or cream shall be sold from a herd containing reactors unless such milk and cream are properly pasteurized. The inspectors of the municipality shall see that this provision is effectively carried out.

10. Tests and examinations of the herds shall be made whenever deemed necessary by the veterinary director general, and after each test and examination the herd shall be dealt with in the manner aforesaid.

11. All cows bought by the owner of a herd while under control shall be submitted to the test and successfully pass it before being placed with the healthy cows.

12. When two successive tests fail to detect any reactors in a herd it shall be deemed healthy, and the veterinary inspector shall, when requested, give a certificate to that effect.

13. The existing regulations respecting tuberculosis, in so far as they may be inconsistent with the present regulations, are hereby repealed.

HEALTH WEEK

WITH the object of focussing public attention for one week in the year on health, in its personal and public aspects, and in order to secure increased appreciation and support for the work of the sanitary authorities, the movement known as Health Week has been carried on in Great Britain for the past two years. The success of the movement has been such as to cause it to be placed on a more permanent footing and the Royal Sanitary Institute has undertaken its future organization.

An influential committee has been formed, with the Right Hon. the Lord Mayor of London as chairman, while among the members are the presidents of the Local Government Board and the Board of Trade, the Provost of Glasgow and the Lord Mayors of all the large cities and towns.

A Health Week has an important function to perform. At present there is no driving force behind the great question of health. Any cause which depends for its vitality and force upon public opinion must have something definite on which public opinion may crystallize—there must be some opportunity for focussing attention and rekindling enthusiasm. It is too often the experience that the work done by health authorities loses much of its effect through lack of response on the part of those for whom it is done. Health Week aims to emphasize the importance of personal attention to hygiene, by making health the chief topic of public concern during one week in each year, during which may be imparted to the public sound information as to hygiene, both personal and public; striving to build up a public opinion which will not tolerate a high disease rate, an excessive infant mortality, the insanitary housing of our people, or other matters having an undue influence on morbidity and mortality.

The manner in which Health Week is observed in a municipality or district must necessarily be determined by a local committee, but efforts should be made to bring members of every class and profession into line with the work. To inaugurate the proposal, a public meeting may be called and the objects of the movement briefly and clearly explained, and a representative committee and officers appointed to define and organize the work to be done.

Personnel of Committee

The local committee should, as far as possible, comprise representatives of every public body and private society which is in any way concerned with health, and every agency which plays a part in moulding public opinion. For this purpose the following may be invited to nominate members of the local committee:—The local health authority; the public and separate school and collegiate authorities; the board of trade; the local societies dealing with health, education, housing, and the prevention of tuberculosis; the National Council of Women and Daughters of the Empire; the Canadian Club; the clergy of all denominations, the press, the medical profession, the teaching profession, the militia medical officers, and the nursing profession; fraternal societies, and others having influence with any considerable section of the people. This large committee should appoint several small sub-committees to carry out the various executive duties incident to the movement and should endeavour in every way possible to get in touch with all who might give assistance towards attaining the end in view.

The local committee may decide, either to take up a general health campaign, or, by preference, may direct its energies to the concentration of public opinion on some particular problem. It is highly desirable that questions of a doubtful or controversial nature should be avoided and that nothing should be countenanced which savours of sensationalism or fads. It is rather advisable that stress should be laid on the benefit to be derived from regard to the laws of health, and the saving of life and immunity from disease which result from an efficient administration of public health, as well as the importance of attention to personal hygiene.

The programme for the week will necessarily be governed by local resources and local needs, but the following suggestions give a general idea of what may be done.

ITEMS FOR PROGRAMME

Sermons in churches and chapels, lessons in Sunday schools, addresses to clubs, societies and adult schools, lessons and addresses in day schools; essays by children; health talks at factories, mothers' meetings, literary and other societies, etc.; lantern lectures and cinematograph shows; lectures in city and town halls and municipal buildings; health exhibitions; baby competitions; healthy houses and furnishings, cleaning, model cottages; general cleaning-up days; visits to municipal works, disinfecting stations, water works, cleansing stations, schools for mothers, hospitals, housing, open-air schools, etc.; exhibitions by gas and electrical departments; cookery lectures, smoke abatement, home nursing, housewifery, infant care, physical culture; use of schools as centres for lectures and demonstrations; demonstrations by Boy Scouts, Boys' Brigades, Girls' Brigades, ambulance and first aid demonstrations.

SUBJECTS FOR LECTURES

Hygiene in Daily Life; Consumption, its Cause, Prevention and Cure; Open-air Schools; Food in Health and Disease; Microbes, our Secret Friends and Foes; Soap and Water; Clothing and Personal Hygiene; Parent and Child; Mother and Baby; The House We Live in; Health of a School Child; Formation of Health Habits; Hygiene in the Home; Flies and Disease; Physical Culture; Game and Recreations; Common Ailments, their Cure and Prevention; What the Municipality Does to Keep Us Healthy; Drainage of Towns; Water Supply, Scavenging, etc; Abatement of Nuisances; Food Inspection.

This brief description of Health Week is given to the public of Canada with the object of arousing interest, and in anticipation of its general acceptance, for it is felt that public interest must be stimulated in the various subjects as above outlined.

With every man, woman, and child in the Dominion practising personal hygiene the difficulties of public health officials will be minimized and the physical and moral uplift will be such as to surprise even the most sanguine sanitarian. We must, however, educate before we can practise.

THE CORRECT PRINCIPLES OF CHILD-REARING MUST BE TAUGHT

The principles involved in the care of the infant and in its rearing are simple; they are easy to understand, and easy to put into practice. It is, in fact, quite a simple matter to bring up an infant, if correct principles are adopted; it is another matter if principle is lacking or if special systems are employed.

Nature must be followed, or be gently led; coercion and opposition are extreme weapons. The whole tendency of nature is to carry out correct principles; correct principles are those which most nearly adopt the highest strivings of nature. The correct principles should be included in the "finishing education" of every girl; it is only the characteristic of prudery which makes us the laughing stock of the world, that prevents us from leading other nations in this. A generation or two ago the elder girls of lower and middle-class families served a useful apprenticeship at home, and learnt the prevailing principles of the care of infants practically from the persons of their little brothers and sisters; such opportunities are becoming rarer to-day, as the size of families decreases. It is possible that in the future we shall insist on practical instruction in child-rearing being imparted to every healthy girl during that period of comparative idleness which now intervenes between her school days and her marriage. —*H. Laing Gordon, M.D.*

THE FIRST CANADIAN TOWN-PLANNING REGULATIONS

As an example of the earnest intentions of a Canadian city to make possible the laws of the province in respect to this important subject, Halifax, N.S., sets the pace for others.

The regulations were approved of by the Board of Control, Jan. 30th, 1914, but their adoption by the City Council has only just been brought about.

That they may be useful to other municipalities, and stimulate the progress of town planning, the regulations are given in full.

Town Planning Regulations

1. (a) Before any application for authority to prepare a town planning scheme is made, notice of such intention shall be given by advertisement in at least two newspapers published in the city, for not less than two weeks previous to the date on which it is proposed to make such application.

(b) The person or persons making such application shall, not later than the date on which the first of such notices is given, deposit at the office of the city engineer for the purpose of inspection and shall keep deposited thereat for a period of not less than one month from the date on which the last notice is given, a map or plan of the land proposed to be included in such scheme. Such map or plan shall be on the scale of 25 inches to the mile and shall be open for inspection by any person interested, without payment of any fee, during the hours at which such office is open.

(c) The notice shall specify the area proposed to be included in said scheme and shall state that a map of that land has been deposited at the office of the city engineer for the purpose of inspection during the hours at which such office is open, and the date of the meeting of the board of control at which it is proposed to make such application.

2. Where it is proposed to include in a town planning scheme land, any portion of which is outside the city, notice of such intended application shall be given in writing to the warden or mayor of the town or municipality in which such portion of said land is situated, and to the owner of said land.

3. At such meeting, or if no quorum attends at the next meeting, or at any other meeting to which the hearing of the matter is adjourned, the board of control shall hear

T.C.p — Legislation. √
[Halifax, N.S.]

any objections to the inclusion of any land in the scheme and may grant or refuse authority to prepare such scheme in respect of all or any portion of the land in respect of which the application is made or may direct that other land be included in such scheme.

4. The date on which the application for authority to propose such scheme is made shall, unless the board of control otherwise directs, be the date referred to under the provisions of sub-section (2) of section (11) of the Town Planning Act as the date after which, on account of any building erected on, or contract made or other thing done with respect to land included in a scheme, a person shall not be entitled to obtain compensation.

5. Upon the passing of a resolution by the board of control authorizing the preparation of a town planning scheme for any area, notice thereof shall be given by advertisement published in two newspapers published in the city for not less than one week.

6. When a plan or scheme has been completed and is ready to be submitted to the council for approval or adoption, the draft plan and scheme shall be deposited at the office of the city engineer for inspection, together with the following information and estimates respecting such scheme, unless the board of control shall disapprove the same:

(a) The acreage included in said scheme.

(b) The population included in said area.

(c) The assessed value of all property within said area, with the names and addresses of the owners thereof.

(d) The taxes and municipal revenue derived from property within said area.

(e) A map or maps on a scale of 25 inches to the mile on which shall be shown:

(1.) The lines and widths, official as well as otherwise, of all existing roads or railways or tramways.

(2.) The lines of any existing sewers, paved roadways, or sidewalks, and pipes or mains for the supply of water, gas, or electricity.

(3.) The location of all buildings within such area, indicating the material of which such buildings are constructed.

(4.) The lands and widths of all roads proposed as part of the scheme and the connection of such proposed roads with existing roads.

(5.) The roads or ways which it is proposed to stop or divert.

(6.) The areas proposed by the scheme to be located for the purpose of open spaces, private or public, or to be used for any other special purpose.

(7.) The contour and topography of the area included in said scheme.

(f) Information showing in what respects the proposals in the scheme would involve the repeal, suspension, or amendment of any statutory enactments, ordinances, regulations, or other provisions which are in operation in the area included in the scheme.

(g) What limitations or restrictions it is proposed shall be made in respect of the area or any part thereof included in said scheme, and the manner in which said limitations or restrictions shall be made binding and effective.

(h) Information as to whether any of the owners of land included in said area claim or may claim compensation on the ground that his property would be injuriously affected by making of the scheme.

(i) The estimated cost of carrying out the scheme, showing how such estimated cost is arrived at.

(j) The manner in which and by whom it is expected that the cost of said scheme is expected to be borne.

7. (a) Before any application is made to the board of control to approve or adopt a town planning scheme notice of such application shall be given by advertisement in at least two newspapers published in the city for not less than two weeks previous to the date on which it is proposed to make such application.

(b) The notice shall specify the area included in said scheme, the date of the passing of the resolution authorizing the preparation of said scheme, the date of the deposit of the draft plan and scheme referred to in section 6 hereof, in the city engineer's office, and the date of the meeting of the plan and scheme approved and adopted.

8. (a) At such meeting, or if no quorum attends, at the next meeting, or at any other meeting to which the hearing of the matter is adjourned, the board of control shall hear any objections to said scheme, whether made by or at the instance of any owner, tenant, improvement league, historical society or other person or body of persons interested in the amenity of the proposed scheme.

(b) The board of control shall endeavor, by conference between the owner, persons, or councils, and by any other means available, to secure the co-operation of such owners, persons or councils and may arrange for one or more public meetings at such time and place as such board may decide for the purpose of considering the proposed scheme.

9. The board of control, after hearing any objections to said scheme, may recommend to the council that said scheme be adopted or confirmed, or altered or amended in any particular or otherwise, and may fix the date when it will come into effect.

10. Notwithstanding the provisions of Sections 108 to 111 of the city charter, the council may adopt, confirm, alter, amend, reject, or refer back to the board of control any report or recommendation made by the board to the council in respect of any town planning scheme, by a vote of the majority of the members of said council present at any meeting.

11. Upon the passing of a resolution of the Council approving of any town planing scheme for any area, notice thereof shall be given by advertisement in two newspapers in the city not for less than one week.

A SUGGESTION TO FAIR MANAGERS

Encourage the mothers of Canada to suckle their babies by offering a handsome bounty to the woman who feeds her baby with breast milk rather than proffer prizes to those brought up on the bottle, and for this purpose, select your judges not because of their political or social standing, but because they have a knowledge of this important question. This suggestion applies to rural and urban districts alike.

Life's song, indeed, would lose its charm,
  Were there no babies to begin it;
A doleful place this world would be
  Were there no little people in it.

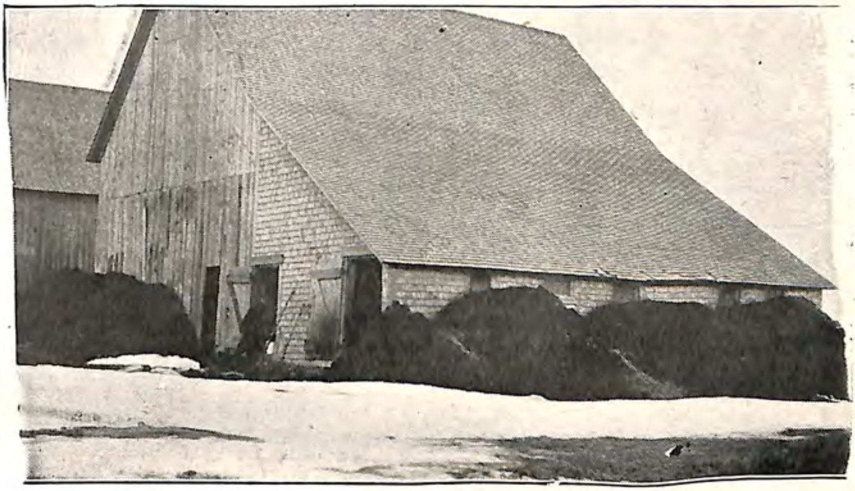
—*John Greenleaf Whittier.*

MUNICIPAL MILK SUPPLY

IT is the duty of the Municipality to see that you get pure, clean and fresh milk.

It is your duty to see that it is kept pure, clean and fresh.
Don't buy milk unless you are sure it is clean.
Milk not kept on ice is unsafe to use.

The foregoing statements are accurate. If we consider the latter statement alone, every consumer of milk in Canada may accept it as a fact, that during the hot summer months, very little of the milk sold in this country is safe to use because there is no attention given to the refrigeration of milk from the time it leaves the dairy farm until it reaches the cold storage plant of the milk vendors. Souring frequently occurs in the express car on the way to the city. This means increased cost to the consumer, who, though he may not appreciate it, is in every case charged with all losses incurred in handling.



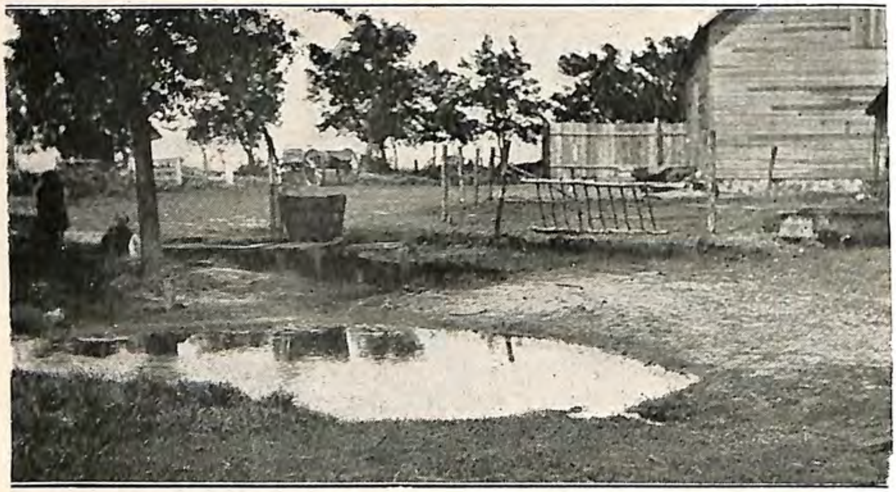
AN UNDESIRABLE SOURCE OF MILK SUPPLY

Typical example of an unsanitary cow stable. Milk from cows housed in quarters of this kind is sold in almost every Canadian Municipality.

If, then, milk not kept on ice is unsafe to use during many months of the year, and if it is the duty of municipal authorities to see that the consumer gets pure, clean, fresh milk, what are we going to do about it?

The public will not tolerate a merely destructive policy; the sanitarian must suggest a reasonable and rational substantive course.

Some will suggest that the solution of the problem will be found in an elaborate scheme of inspection of dairies and dairy cattle; others will say that a rigid supervision of all milk delivered, including a straining of samples through cotton disks, laboratory examinations, and periodical examination of dairies will suffice. The former method is costly and has, so far, resulted in guaranteeing only a small percentage of the total amount sold. Almost invariably the result has been to increase the cost to the consumer. The latter method, where in operation, has proved that a better average standard can be assured to the consumer—the town-dweller gets less barnyard manure and less pump water—but it is not good enough.



WOULD YOU LIKE TO DRINK THE MILK?

The water from this farm is liable to contamination from the stagnant pool of manure water in the foreground which drains down from the adjacent barnyard. The cows drink the water from this well and the milk cans are washed in it.

With a view to securing the desired standard, the suggestion is made that municipalities should alone control the purchase and distribution of milk, thereby removing the chief dangers, to overcome which requires to-day a body of sanitary police officials, whose annual upkeep materially adds to the price paid by the consumer. Towns and cities should deal with this problem somewhat as they do with the water supply, by taking it into their own hands, the only difference being that they would not own the dairy herds nor the dairies, as they do the water reservoirs. An urban municipality could establish a milk department and, for this, would require one or more depots situated within its boundaries, equipped with all the apparatus necessary for refrigeration, pasteurization, bottling, and sterilization of containers of all kinds, also for modification of milk for infants. In addition to this all containers and vehicles for collection, transportation and distribution would be owned and controlled by the municipality, thus disposing at once of many of the difficult points where deterioration at present occurs. As to purchase, the milk department would have the most powerful "veto power" over impure milk that it would be possible to conceive. Purchase would be made only from those dairies approved of by its officers and milk, found to be below the standard fixed when tested at the depot, could be refused.

A municipal milk department as outlined would mean that excessive middleman's profits would be eliminated, and the public would be assured that all the people, both rich and poor, were getting milk that was clean, pure and fresh, at the minimum cost. Such a scheme is not now in operation, but it is as feasible and practicable as many other civic health projects which are now being carried on by municipal authorities, and which before they were initiated seemed to possess greater difficulties than does this one. Certainly none are of greater moment to the manhood and womanhood of the next generation.

HOW TO DEAL WITH SLUMS

THE opinion of an experienced medical officer of health upon this question is not only of interest, but, because it comes from the leading sanitarian in Scotland, and is the result of his practical work on the question, the health authorities of Canadian cities may very properly be led by the statements of Dr. A. K. Chalmers, M.O.H., of Glasgow. The doctor says:

"Get rid of the insanitary houses. The best way in which this can be done is by the co-operation of the municipality, the owners, and private effort. At present people are inclined to temporize. They say that other houses must be built first. They speak about the rights of property. They discuss the expense. Now, to my mind, there is only one possible course open to the state, or to the municipality, when houses are condemned as unfit for human habitation. They have got to be destroyed. What is to become of the inhabitants is not the question. What the owners of the slums will say does not matter in the least. Science declares these houses unfit for human life. While they remain, they are an offence. The poison centre of every city is the slum area. Those in authority have one thing, and one thing only to do—they must destroy. My advice is: Do it, and watch what happens. Don't be frightened by this consideration or by that. Do it and watch the results.

No man ought to be allowed to own or live in a bad house. Everything we know is dead against that. These poison centres fatally weaken the vitality of civilization.

"Whoever goes deeply into these problems comes to the personal equation, the personal factor. It is man with his soul that confronts the politician, the doctor, and the social reformer.

"Life is too sacred a thing for diabolical experiments.

"Infantile mortality is dreadful among families who live in one room and in two rooms; our tables show clearly how sensibly it lessens in cases of three rooms and four rooms.

"Civilisation, if it would advance, must destroy its poison centres—we must not create them—prevent them."

THE PUBLIC ABATTOIR

ANGLO-SAXON nations, with their democratic forms of government, might reasonably be expected to blaze the trail for advanced legislation in the interest of popular well-being. In many respects the expectation is fulfilled; in others it is not. An instance of the latter is afforded by the scarcity on our statute books of measures aiming at salutary improvements of certain kinds. In this field of legislation Great Britain, Canada and the various states of the American union have much to learn from the practical methods of the nations of continental Europe. One feature, in particular, connected with the safeguarding of public health, ought to be given much closer attention throughout the Dominion than it has hitherto received, viz, the strict regulation of slaughtering conditions and the thorough inspection of animals destined for human consumption.

It is impossible to exercise too much care in order to guarantee a pure meat supply. Animal food forms such an important item in the national food bill, and diseases in animals are so intimately related to corresponding ailments in human beings, that one cannot over-emphasize the necessity for precaution. The two primary problems to be considered are the elimination of diseased stock and the maintenance of sanitary slaughtering premises. What is the most effective and, at the same time, the most economical method of securing these desired conditions? The continuance of our present private slaughter-house system can claim little consideration from those to whom public health and safety makes a stronger appeal than private profit.

It is beyond the scope of this article to discuss the merits and demerits of the various schemes practised or suggested for the proper inspection of meat. In the Dominion little has been done, either by experiment or investigation, but a study of the experience of other countries ought to serve as a guide in the solution of our own peculiar Canadian problem. It will establish at least one fact upon which nations are unanimous, although, in regard to the minor details of their respective systems, they differ. The point of common acceptance and agreement is that any successful system must centre in the municipal abattoir, the use of which for slaughtering operations must be made compulsory upon all local butchers. This is the conclusion reached by Germany, a nation in which meat inspection has been carried on systematically for over thirty years; by many English cities, by such Scotch centres as Glasgow and Edinburgh, by Austria, France, Denmark and other continental nations. It is also the decision arrived at by the investigating commission recently appointed to study the question on behalf of the state of Kentucky. The following quotation from the bulletin which contains its findings is significant: "The municipal abattoir is the only effective means both to control the sanitary conditions and to eliminate diseased animals."

As stated before, little has yet been done in Canada toward the securing of a system of municipal abattoirs. One or two cities have public abattoirs; several others have made unsuccessful endeavours to secure them. More careful study and consideration of the problem, however, cannot fail to induce the Canadian people to follow the lead of European nations in making adequate provision for the inspection of meat and thus add to the mass of salutary legislation which has for its object the conservation of human life.—*O. M.*

PREVENTION OF OCCUPATIONAL DISEASES

IN spite of the importance of industrial processes and labour conditions upon the health of the community, our knowledge and statistical data are meagre, and this is due largely to the following causes:

(1) With few recent exceptions, occupational diseases are not under the law reportable to the health authorities. (2) Physicians are not sufficiently familiar with industrial processes, or even with the processes in trades designated as dangerous, so that they fail to recognize the relation of morbidity to occupation. (3) Statements of occupation on morbidity and mortality records are too general or inaccurate to be of any great value. (4) Inspection of industrial establishments is, as a rule, carried on by men entirely unfamiliar with health matters. (5) There is a lack of realization, both among employers and employees, of the dangers involved in certain processes.

Massachusetts has now for seven years carried on careful investigations on occupational hygiene. In 1907, the late Dr. Charles Harrington submitted a report to the Massachusetts legislature which dealt in a systematic manner with the effects upon the health of operatives in the various industries of Massachusetts. In the same year, a law was enacted whereby the state was divided into 15 health districts and a physician was appointed in each district as State Inspector of Health.

Massachusetts was thus the first state in the Union to recognize that sanitary inspection of factories is essentially a health matter, and should be under the charge of the central authority of the state. During the five years of their work the State Inspectors of Health have carried on extensive investigations in which special attention was given to the health of young persons employed in industrial establishments. As a result, a law was enacted in Massachusetts whereby minors are excluded from trades and processes designated by the state board of health as injurious to health.

WHAT IS NEEDED

To protect the workers from the ill effects upon their health from industrial processes or unsanitary conditions the following measures should be adopted:

(1) To collect complete and accurate data about industrial processes and about conditions under which the various industries are carried on.

(2) To obtain more accurate and detailed information relative to occupation on morbidity and mortality records.

(3) To instruct the medical student in this important field of preventive medicine by a course of lectures on the more important industrial processes and the diseases to which they give rise.

(4) To place the specific industrial diseases on the list of diseases notifiable to the central health authority.

(5) To examine periodically all workers in certain industries, these industries to be named by the central health authority.

(6) To exclude minors and women from certain industries which are designated by the central health authority as injurious to health.

(7) To have adequate laws regulating sanitary conditions and protective devices in industrial establishments and to have such laws intelligently enforced.

(8) To have the central health authority issue regulations for certain dangerous trades with instructions to employers and employees how to guard themselves against the ill effects of their work, and to have such instructions posted in the workrooms.

(9) To carry on an extensive educational campaign both among employer and employees as to the value of protective measures and good sanitary conditions.

CHILDREN'S COUNTRY HOLIDAYS

THE Local Government Board of England, as recently as June 25th, 1914, directed the attention of local sanitary authorities to the precautionary measures which should be taken to prevent the introduction and spread of communicable diseases which result from town children being sent to country districts by philanthropic organizations.

As this laudable movement is now receiving considerable attention in our larger cities through the agency of fresh air funds, it may be in the direction of prevention to here reproduce the substance of this timely circular.

1. *Communication with the medical officer of health in the country district.*

For this purpose intended arrangements should be communicated as long as possible beforehand to the medical officer of health of the country district concerned. This may either be done directly or through the medical officer of health of the county. In the case of larger agencies it seems advisable that such communications should be sent by the central office rather than by individual voluntary workers.

Although it should be understood that it is no part of the duty of the medical officer of health in the country districts to undertake special supervision of the arrangement made for these children or to advise the agencies organizing the holidays, it is believed that he will generally be prepared to extend such help as circumstances permit to the organizations concerned. It is anticipated that the communications above referred to will assist the agency by preventing children being sent to dwellings in the country where they would be exposed to risk of infection or to insanitary conditions, while the medical officer of health, in taking precautions against the spread of infectious disease in his district, will be materially assisted by information of the nature of the inquiries which have been made before the children are sent down, and by being put in touch with the persons who are responsible for their care and maintenance whilst in the country.

Sometimes also the occurrence of undesirable overcrowding might be prevented by previous reference to house inspection reports or other records available to the sanitary officers.

2. *Inquiries as to infectious disease before the children are sent.*

All practicable inquiries should be made to ensure that no children are sent to the country in an infectious condition or in the incubation stage of any acute infectious disease, or from infected houses.

In this matter agencies organizing country holidays vary so greatly in the scale of their operations and in the system by which the children are selected that no one procedure can be advocated. Some agencies arrange for personal inquiries to be made by voluntary workers at the children's homes; and the board think it desirable that this practice should be generally followed, care being taken that the inquiries instituted in each case are thorough and are made as near as possible to the date of departure.

Complete reliance should not be placed either on certificates of freedom from infection given many days before that date, or upon mere examination of the child at the last moment, without inquiries at the home.

As regards the ordinary notifiable infectious diseases, and sometimes also in the case of other infectious diseases, such as measles or whooping cough, the medical officer of health of the town would usually be in a position materially to facilitate inquiries, if he is supplied by the agency, preferably at least a week in advance, with a list of the names and addresses of the children and the date of their proposed departure. The addresses can then be compared with the records of infectious cases, revised within one or two days of the specified date, and the cases in which infection is suspected brought to the notice of the agency.

3. *Cleanly condition of children before departure.*

It is important that all children at the time of their departure for the holiday should be required to be clean and be provided with clean clothes for wearing during the holiday.

The board understands that many of the agencies already pay very strict attention to this matter, and obtain the co-operation of the local authority in the town, which gives assistance through health visitors or school nurses, by the use of cleansing stations, or in other ways. It seems desirable that such co-operation should be sought and furnished wherever practicable.

4. *Detection of infectious disease in children when in the country.*

The necessity of immediately calling in medical advice should a child fall ill cannot be too strongly impressed upon those responsible for the care of the children in the country, and if infectious disease occurs, the medical officer of health of the district should be at once informed.

The board would suggest that medical officers of health in districts which are affected by children's country holiday arrangements should bring the above suggestions to the notice of any agencies organizing country holidays, and also of individual religious or social workers who are known to arrange for such holidays on a smaller scale.

Large sums of money are spent in erecting, equipping, and maintaining isolation hospitals to limit the spread of disease among the people. Millions are spent annually in the administration of our police, industrial schools, jails, etc., for the purpose of preventing and punishing crime. Soon we shall be spending millions to build and maintain sanatoria and institutions for the eradication of tuberculosis. When the nation wakes fully to the fact that slums foster and create vice and pestilence, are the hotbeds of tuberculosis and other deadly maladies, especially in the young, it will be prepared to spend further millions upon their extinction. No real solution of this problem is possible without the co-operation of the state and the local authorities, the former being willing to make "grants in aid" and the latter in their turn supplementing such assistance from local sources.—*T. Ridley Baily, M.D.*

Little or great is man,
  Great if he will, or if he will
  A pigmy still,
For what he will he can.

—*Christena Rossetti.*

The foundations of national glory are set in the homes of the people, and they will only remain unshaken while the family life of our nation is strong, simple, and pure.—*His Majesty King George V.*